Reference Materials
Production System in Russia

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Executive Summary

1. CRM Role in Refining Industry
2. Production Stages
3. Certification Methods
4. Approval and Registration
5. International Cooperation: Round Robin Analyses and Sales
Certified Reference Materials Categories in Russia

Company Approved CRM

Industry Approved CRM

Nationally Approved CRM

Internationally Approved CRM
CRM Production Stages

Material Manufacturing

Sampling → Homogeneity analyses → Homogeneity ? → RM

4 Certification Methods

- Certified Procedure
- Calculation and Experimental Procedure
- Round Robin Analysis (Inter-lab Analysis)
- Reference Template
Company Certified Reference Materials: Approval and Registration

Metrological Expert Validation within the Company Laboratory → Company Executive Officer → Company Approved Certificate of Quality
Industry Certified Reference Materials: Approval and Registration

Sampling

Laboratory of Another Company

CRM

Metrological Validation

Industry Approved Certificate of Quality
Nationally Certified Reference Material: Approval and Registration

Reference Materials Production System in Russia
Internationally Certified Reference Material: Approval and Registration

Interstate Committee of Standardization, Metrology & Certification

Document Validation

CRM

Internationally Approved Certificate of Quality
Krastsvetmet is one of the world's leading refiners of platinum group metals, gold and silver.
Round Robin Analyses Cooperation

- Russia
- Kazakhstan
- Germany
- Switzerland
- Canada
- Japan
- Australia
- South Africa
- Belgium

Reference Materials Production System in Russia
Thank you for attention!

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